

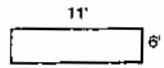
| | | |
|--|--|---|
| GZA GeoEnvironmental, Inc. Engineers/Scientists One Edgewater Drive Norwood, Massachusetts 02062 | National Grid Substation West Boylston, Massachusetts | Test Pit No. <u>TP-3</u> Page No. <u>1</u> of <u>1</u> File No. <u>18008.00</u> Checked By: <u>CDH</u> |
|--|--|---|

| | | |
|---|---|---|
| GZA Rep. <u>Sean Kearney</u> Weather <u>Sunny, Teens</u> | Excavation Equipment Contractor <u>CMS, Inc.</u> Operator _____ Make <u>CAT</u> Model <u>315B</u> Capacity _____ Reach <u>16</u> ft. | Date <u>1/9/2004</u> Ground Elev. <u>470</u> Time Started <u>0945</u> Time Completed <u>1000</u> |
|---|---|---|

| Depth | Soil Description | Sample No. | PID Reading (ppm) | Excav. Effort | Boulders: Count/Class | Note No. |
|-------|--|------------|-------------------|---------------|-----------------------|----------|
| 0' | | | | | | |
| 1' | Dark brown, fine to medium SAND, some clayey Silt, little Roots (topsoil). | | | E | N/A | |
| 2' | Orange-brown, fine to medium SAND, little Silt, trace (+) Gravel, trace (+) Roots (subsoil). | | | E | N/A | |
| 3' | | | | E | N/A | |
| 4' | Tan, medium to coarse SAND, little Gravel, trace (-) Silt, dry. | | | E | N/A | 1 |
| 5' | | | | E | N/A | |
| 6' | | | | E | N/A | |
| 7' | | | | E | N/A | |
| 8' | | | | E | N/A | |
| 9' | Bottom of Test Pit at 9 Feet. | | | E | N/A | |
| 10' | | | | | | |
| 11' | | | | | | |
| 12' | | | | | | |
| 13' | | | | | | |
| 14' | | | | | | |
| 15' | | | | | | |
| 16' | | | | | | |

Notes:

1. Sand layer is loose, National Grid may want a boring for blow counts, hole collapsing from 6-8'.

| | | | | |
|--|---|--|---|--|
| Test Pit Plan  NORTH Volume = <u>22.0</u> cu. yd. | Boulder Class Letter Designation Size Range Classification A 6" - 17" B 18" - 36" C 36" and Larger Excavation Effort E-----Easy M-----Moderate D-----Difficult | Proportions Used TRACE (TR.) 0 - 10% LITTLE (LI.) 10 - 20% SOME (SO.) 20 - 35% AND 35 - 50% | Abbreviations F = Fine M = Medium C = Coarse V = Very F/M = Fine to medium F/C = Fine to coarse GR = Gray BN = Brown YEL = Yellow | GROUNDWATER () Encountered (x) Not Encountered Elapsed Time to Reading (Hours) Depth to Ground-water |
|--|---|--|---|--|

GZA GeoEnvironmental, Inc.
Engineers/Scientists

One Edgewater Drive
Norwood, Massachusetts 02062

National Grid Substation

West Boylston, Massachusetts

Boring No. B-4

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File No. 18008

Checked By: CDH

| Drilling Co. | | Casing | | Sampler | | Groundwater Readings | | | | |
|--|--|---------------------------|--|-------------|--|----------------------|------|-------|--------|----------|
| GZA Drilling | | Type HSA | | Split Spoon | | Date | Time | Depth | Casing | Stab. |
| Foreman John Richardson | | I.D./O.D. 7 5/8" / 4 1/4" | | 1-3/8" / 2" | | 1/22/04 | 1230 | 29.0 | Well | 20 Mins. |
| GZA Rep. Sean Kearney | | Hammer Wt. --- | | 140# | | | | | | |
| Date Start 1/22/04 End 1/22/04 | | Hammer Fall --- | | 30" | | | | | | |
| Location See Exploration Location Plan | | Other | | | | | | | | |
| GS. Elev. 484 ft. Datum | | | | | | | | | | |


| Depth | Casing Blows | Sample Information | | | | | Sample Description and Classification | Stratum Description | NOTES | 5" STANDPIPE | |
|-------|--------------|--------------------|----------|-------------|----------|-----------------|--|---------------------|----------------------|--------------|-----------------------|
| | | No. | Pen/Rec. | Depth (Ft.) | Blows/6" | Field Test Data | | | | | |
| | | S-1 | 24/6 | 0-2 | 3-8 | | Top 3", medium dense, brown, fine to medium SAND and clayey SILT, little Roots. | 5' Topsoil | | | Cement 0-1' |
| | | | | | 9-11 | | Bottom 3", orange brown, fine to medium SAND, little Gravel, little Silt, trace (-) Roots. | Subsoil | | | |
| 5 | | S-2A | 12/6 | 5-6 | 14-12 | | Top 6", dense, tan, fine to medium SAND, trace (-) Silt, trace (-) Gravel. | fine to medium SAND | | | |
| | | S-2B | 12/6 | 6-7 | 28-34 | | Bottom 6", dense, brown, fine to coarse SAND, some Gravel, trace (+) Silt, dry. | | | | Backfill 1-19' |
| 10 | | S-3 | 24/6 | 10-12 | 24-38 | | Very dense, brown, fine to coarse SAND and GRAVEL, trace (-) Silt, dry. | | 2" PVC Riser 0-20' | | |
| | | | | | 39-27 | | | | | | |
| 15 | | S-4 | 24/11 | 15-17 | 6-12 | | Medium dense, gray, medium to coarse SAND, trace (+) Gravel, trace (-) Silt, dry. | Gravelly SAND | | | Bentonite Seal 18-19' |
| | | | | | 13-14 | | | | | | |
| 20 | | S-5 | 24/13 | 20-22 | 8-9 | | Medium dense, brownish gray, medium to coarse SAND, trace (-) Gravel, trace (-) silt, moist. | | | | |
| | | | | | 10-10 | | | | | | |
| 25 | | S-6 | 7/6 | 25-25.6 | 72 | | Very dense, gray brown, fine to medium SAND, some clayey Silt, little Gravel, wet. | Glacial Till | 2" PVC Screen 20-35' | | Sandpack 19-35' |
| | | | | | 100/1" | | | | | | |
| 30 | | | | | | | | | | | |

- Notes:
- Stratification lines represent approximate boundaries between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to factors other than those present at the time measurements were made.
 - Ground surface elevation estimated from plan entitled "Property/Plan - Existing Conditions, Wachusett Substation, No. 47", prepared by National Grid. Elevations referenced to approximate Mean Sea Level.

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| Depth | CASING BLOWS | Sample Information | | | | | Sample Description and Classification | Stratum Description | NOTES |
|-------|-----------------|--------------------|----------|----------------|----------|--------------------|--|------------------------|--|
| | | No. | Pen/Rec. | Depth (Ft.) | Blows/6" | Field Test Data | | | |
| | | S-7 | 24/7 | 30-32 | 45-48 | | Very dense, gray brown, fine to medium SAND and GRAVEL, little clayey Silt, wet. | Glacial Till |  Sandpack 18-35' |
| | | | | | 29-28 | | | | |
| 35 | | | | | | | Bottom of Boring at 35 Feet | | |
| 40 | | | | | | | | | |
| 45 | | | | | | | | | |
| 50 | | | | | | | | | |
| 55 | | | | | | | | | |
| 60 | | | | | | | | | |